Application No.: 10/714,090
Filing Date: November 14, 2003
Group Art Unit: 1725

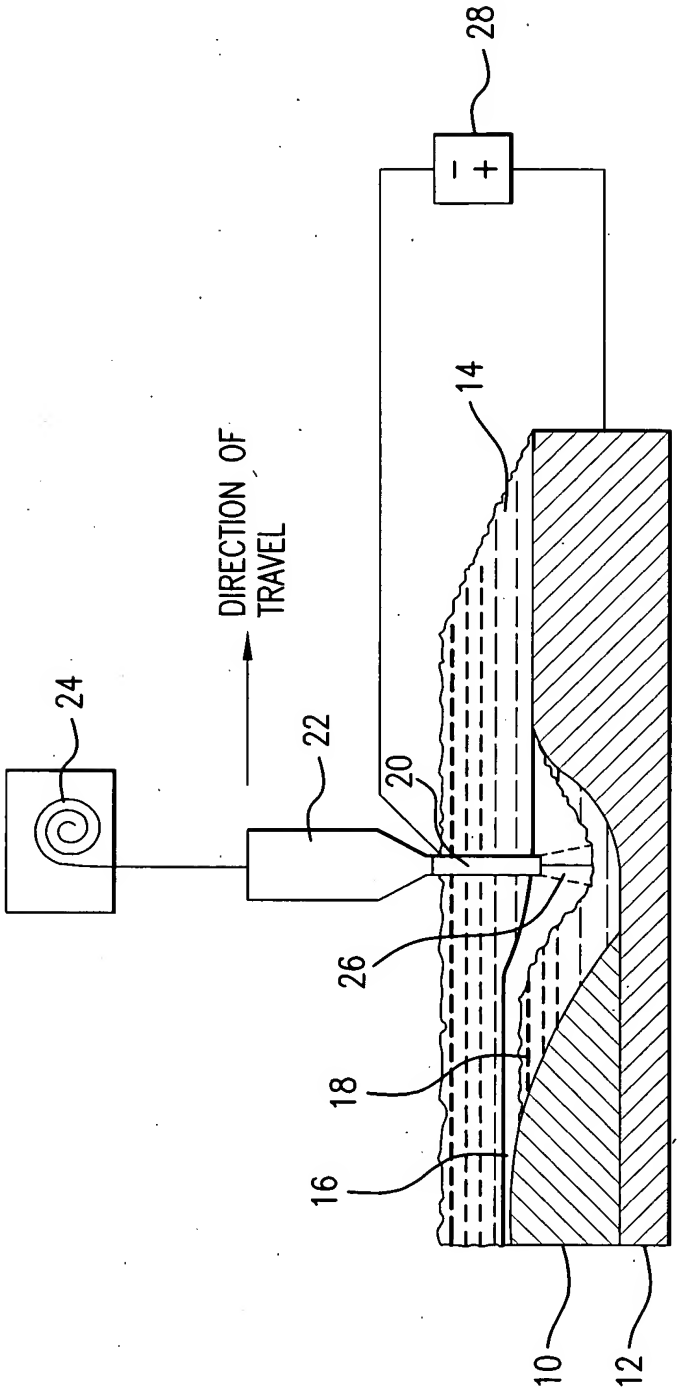

FIG. 1

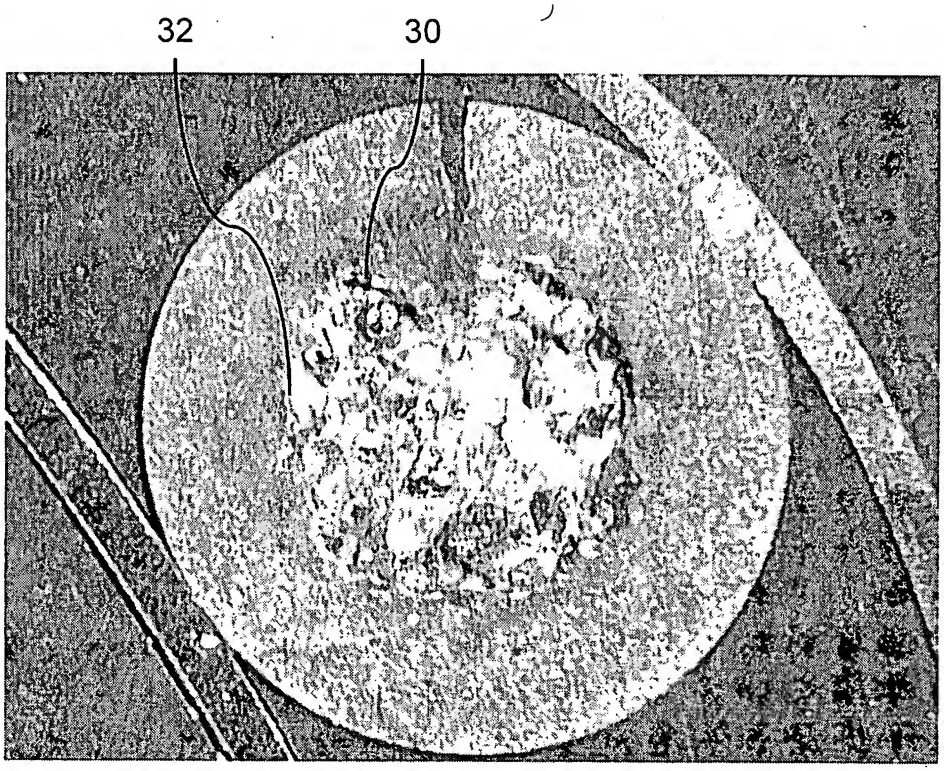

FIG.2

TABLE 1

Raw Material	047N-01-003	047N-03-001	047N-03-002	047N-03-003	047N-03-006	047N-03-007	047N-03-008	047N-03-009	047N-03-010	047N-03-011
Fe Powder	83.65	77.25	73.25	73.25	90.75	90.25	87.75	83.25	81.25	61.25
Ferro Mg, Hi C	3.75	3.75	3.75	3.75	3.75	3.75	3.75	3.75	3.75	3.75
Ferro Si	1.60	5.00	5.00	5.00	5.00	5.00	5.00	5.00	5.00	5.00
Alumina, Al_2O_3		7.00	7.00	7.00	0.50	0.50	1.00	3.00	3.00	7.00
Alumina, Al_2O_3 with Na_2O_3		7.00	7.00	7.00		0.50	0.50	3.00	3.00	7.00
$MgCO_3$										1.00
MgAl, 40x200m				4.00			2.00		2.00	4.00
CaF_2										4.00
MgAl, -200m			4.00					2.00		
$CaCO_3$	4.00								2.00	4.00
Fluorspar, CaF_2	5.00									1.00
MgO	2.00									2.00
Approx slag, %	*11.00*	*14.00*	*18.00*	*18.00*	*0.50*	*1.00*	*3.50*	*8.00*	*10.00*	*30.00*
	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00

FIG.3

TABLE 2

Flux Composition	Wt%
Bauxite/Al_2O_3	30%
Fluorides	15%
Silicates and binders	10%
Magnesite	10%
Manganese Compounds	10%
Quartz, SiO_2	5%
Silicon	<5%
Mineral Silicates	<5%
Iron	<5%

FIG.4

TABLE 3
Deposit Chemistries

Element	Carbon Steels	Low Alloy Steels
C	0.15	0.15
Mn	1.80	2.10
Si	0.90	0.80
P	0.030	0.030
S	0.030	0.030
Cr	–	8.0
Ni	–	4.0
Mo	–	1.0
Cu	0.30	0.75
Ti+V+Zr	–	0.030

FIG.5